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Technology Implementation in Elderly Care:

Subject Positioning in Times of Transformation

Beata Segercrantz¹ and Maria Forss²

Abstract

Innovation is often celebrated as a solution to various challenges in care work. Thus a growing number of care workers are likely to experience innovations in their daily work. This article examines how care workers and project workers in elderly care are effected by contemporary transformations by exploring: (1) how they construct meanings around innovation implementation and (2) are subject positioned in relation to these meanings. Drawing on discourse analysis, we conduct a case study and analyze semi-structured interviews, observations and organizational documents. We illustrate how innovation is constructed in terms of optimism, but also as a source for struggle, with specific effects on care workers' subject positioning. The findings thus contribute to new insights into the contemporary dominating discourse of innovation and its implications at the level of practice and subjectivity.

Keywords

innovation, technology implementation, subject positioning, care work, elderly care, undesirable consequences

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Elderly care and more generally public healthcare services have been under constant change pressures for some time now due to various change drivers, such as, demographic ageing, increasingly specialized technologies, insufficient coordination mechanisms, and new types of patient groups and diseases. This sector has also increasingly been affected by budgetary challenges. The public health expenditure within EU28 was 6,8% of the GDP in 2016 and these costs have been estimated to rise (EU, 2018). Ageing populations are often associated with these rising costs due to the increasing care demand amongst older adults.

In recent years, innovation has often been seen as a solution to many challenges on the market and increasingly also in public services, such as, elderly care (see e.g., EU, 2015). Innovation is often used in efforts to improve and manage efficiency (Brown & Osborne, 2013; Cucciniello, Guerrazzi, Nasi, & Ongaro, 2015) sometimes reducing, at other times creating, expenditures as well as health (EU, 2018). Cucciniello et al. (2015, p. 1043) argue that information technology (IT) has ‘become increasingly important for contemporary public management and have a huge influence on what is feasible’. Moreover, innovation is often talked about as an essential aspect for the survival and development of public services (Jordan, 2014). Therefore, the concept of innovation typically carries a positive connotation (Godin, 2015). This pro-innovation bias (Kimberly, 1981; Rogers, 1983) has been widely accepted and largely gone unquestioned (Godin & Vinck, 2017) thus providing a limited vocabulary for addressing inefficient and undesirable consequences of innovation (Abrahamsson, 1991).

The aim of this article is therefore to examine how care workers and project workers in elderly care are effected by contemporary transformations by exploring: (1) how they construct meanings around innovation implementation and (2) are subject positioned in relation to these meanings. A combination of the case study research method and discourse analysis provides a

well-established methodology for our inquiry. We analyze a set of data from residential care homes for older adults where technological innovations have recently been implemented.

Technology Implementation in Care Work

There is a vast variety of research around innovation, technology implementation and/or elderly care, for example, language, communication and discourse analyzes around older adults (Hamilton & Hamaguchi, 2015), care workers (Bach, Kessler, & Heron, 2012; Henttonen, Lapointe, Pesonen, & Vanhala, 2013), interaction between older adults and care workers (Backhaus, 2009, 2011; Sachweh, 1998, see also Baxter, Braithwaite, Golish, & Olson, 2002), care work (Palmer & Eveline, 2012), residential care homes (Hujala & Rissanen, 2011) and age in organizations (see special issue in Organizations studies, 2014; see also Moulaert & Biggs, 2012) as well as how these topics intersect with innovation and/or technological implementation (Andersson Marchesoni, Axelsson, Fältholm, & Lindberg, 2015; Engström, Lindqvist, Ljunggren, & Carlsson, 2009; Hjalmarsson, 2009; Juul Lassen, Bønnelycke, & Otto, 2015). Previous studies have also explored how various methods can be used to improve communication in care through, for example, art (Hamilton, 2011), writing and poetry (Ryan & Schindel Martin, 2011), re-telling of life stories (MacLagan & Grant, 2011) and so on. While the studies focusing on communication around older adults and care workers have gained increasing attention since the 1980's and provided important contributions to our understanding of care for older adults (Hamilton & Hamaguchi, 2015), the more recent adoption of innovation and technologies in care work call for language studies that explore the effects of new technologies in care work. This is because various technologies are increasingly used in care work to increase communication, interaction, participation and activation. Our study hence attempts to extend previous research by examining what occurs when technological innovations enter into the interaction between older adults and care workers.

Innovation is a well-studied subject. Definitions of innovation vary from emerging to radical new practices/processes leading to commercialization, diffusion or implementation embedded in more or less complex systems, to definitions of different types of innovations, such as, product, process, organizational or social innovations (Fagerberg, 2005). It has been argued that this body of research has a strong focus on the private sector and on drivers of innovation. For example, Anderson, De Dreu and Nijstad (2004, p. 159) argue, “innovation studies have almost exclusively treated innovation as the dependent variable upon which other ‘predictor’ variables have been regressed”. One exception is the body of research that addresses technology adoption and acceptance, such as, the Technology Acceptance Model (TAM: Davis, 1989).

The objective of technology adoption models is typically to explore how users learn and adopt new technologies in organizations (see e.g., Davis, 1989; Venkatesh, Morris, Davis, & Davis, 2003). Emphasis is put on usage of technologies, while little is known about the outcomes on productivity and performance-oriented constructs (Venkatesh et al., 2003) and even less about the effects of the technology on employee and end-user satisfaction, quality of services etc. This leaves many question around *effects* unanswered, although innovation is increasingly seen in many regions as a method for improving efficiency in public services (Brown & Osborne, 2013; Cucciniello et al., 2015). Thus there seems to be a call for more studies of the effects of innovation in contrast to a focus on drivers and adoption, as more recently there have been scholars highlighting the risks around innovation (Brown & Osborne, 2013) and impacts of innovation in the public health care sector (Cucciniello & Nasi, 2014).

Examples of technologies that have been implemented in this sector are telecare, electronic documentation, social innovation or entertainment devices, such as, game consoles. A shift towards studying implementation in more depth is important if we are to develop a more nuanced understanding of the *effects* of these new technologies in care work (Cuccinielo et al., 2015). This provides an inclusion of a broader spectrum of stakeholder views as the focus on effects implies an inclusion of care worker and client relations. In this article, we are specifically interested in effects of technology implementation on care workers' and project workers views on themselves.

Subject Positioning within Care Work

There is a variety of studies that show how language, discourse and the self are mutually constructed (see e.g., Brooks, 2016; Eley, Callaway, van Zundert, Lipman, & Gallois, 2016; Korica & Molloy, 2010; Stapleton, 2015). The concept of subject position has been used in research when referring to 'a position' occupied by the individual (Burr, 2015); a position, in which social categories, such as, gender, ethnicity, age and education, but also lived experiences and ideology give different persons different opportunities to voice opinions, act, resist, lead, learn, be promoted and so on. Moreover, subject positions constitute the basis for a person's selfhood, identity and experience (Burr, 2015; Davies & Harré, 1990). We will draw on this concept when exploring how care workers and project workers discursively construct their sense of self during technology implementation.

Subject Positioning in the Workplace

While identity and subject positioning in the workplace have been studied from a wide variety of perspectives ranging from functional and interpretive approaches to critical perspectives (Alvesson, Ascraft, & Thomas, 2008; Brown, 2015), we draw on previous work that view

subject positioning as a ‘conversational phenomenon’, that is, as a discursive construction of the self (Davies & Harré, 1990; Halford & Leonard, 2006). From this perspective, our knowledge about the world, including our selfhood, emerges through the interaction and conversations people engage in: the subject can only make her/himself understandable in and through language and discourses that are made available to the subject (Alvesson et al., 2008; Davies & Harré, 1990; Harding, Lee, & Ford, 2014; Stainton Rogers, 2003). Discourse is hence ‘powerful in shaping subjectivities, such that workers come to embody and enact organizationally privileged modes of thought and behavior, in turn achieving organizationally desired outcomes’ (Halford & Leonard, 2006, p. 657). Subjectivity, in other words, is constructed out of discourses made available to the subject, but the subject also participates in the production and deconstruction of discourse and selfhood (Davies & Harré, 1990; Korica & Molloy, 2010; Leonard, 2003), a process highly intertwined with power relations in the workplace and society at large.

Subject Positioning within the Public Sector and Care Work

Subject positioning specifically within the context of the public sector has attracted some scholarly attention, for example, around the emergence of new public management (NPM), which carries a variety of meanings (see e.g., Osborne, 2006), but broadly refers to attempts of private sector management in the public sector. Elderly care has, for example, in recent years witnessed continuous efforts in many countries to make performance more efficient through NPM and innovation within ever changing care organizations and structures. Various studies have shown how NPM has had major effects on public service professionals and strongly transformed as well as shaped new subjectivities and identities in organizations (e.g., Du Gay, 1996; Farrell & Morris, 2003; Thomas & Davies, 2005).

Likewise, studies within the social and health care sector have illustrated how professional subjectivities are related to new technologies or other organizational changes and conditions (Korica & Molloy, 2010), which are intertwined with power relations, discourse and language use (e.g., Eley et al., 2016; Setchell, Leach, Watson, & Hewett, 2015). For example, technology implementation within this sector has been shown to enable and constrain subjectivities (Hjalmarsson, 2009; Lindsay, 2008; Nicolini, 2007; Oudshoorn, 2011).

Subject Positioning, Micro Practices and the Pro-Innovation Discourse

The above suggests that subject positioning within care work always are produced in a local context, while gaining meaning through interconnections to broader systems of texts, discursive practices, processes of meaning-making and language use (Jokinen & Juhila, 1999; Stainton Rogers, 2003). Moreover, during innovation implementation, the dominant pro-innovation discourse is likely to play a central role amongst various competing discourses as the interaction between care workers and older adults are interrupted by new technologies. This in turn has implications for how care workers talk about innovation and by effect, how they seek to position themselves. The process of subject positioning during innovation implementation could thus be assumed to have effects that imply *shifting* subject positioning over time as the implementation unfolds and meanings are re-negotiated within care organizations (Roberts, 2004). We thus turn attention to how discourses around the implementation of technologies provide or restrict certain care worker subject positions, and how care workers relate to, identify with and resist such subject positions.

Method

The study is conducted as a discourse analysis designed as a case study (Yin, 2014). A holistic multiple-case design was chosen as our study focuses on a contemporary phenomenon in

context (the case of technology implementation in care work) and relies on multiple sources of material as well as draws on an abductive line of reasoning (Yin, 2014). As outlined by Yin (2014) there are different types of rationales for conducting a multiple-case design. Our rationale for adopting a multiple-case design is that we first focus on one case, that is, a residential home for older adults that recently has adopted a game console in the care work, after which we analyze a second case where computer tablets were used with older adults. Our intention is to identify possible similar result in the second case (literal replication) (Yin, 2014). As our cases do not include subunits, our multiple-case study is holistic in orientation.

Context and Data

Our empirical study is carried out in residential care homes in Finland. As in many countries, the population is aging in Finland, which has increased the number of persons living in residential care homes during the last decades. In 2017 10 % of persons aged 65, 21 % of the persons aged 75 and 42 % of persons aged 85 received various forms of elderly care, such as, home services, institutional living and residential care (THL, 2018). Approximately 9 % of the persons aged 75 or older received round-the-clock services (THL, 2018). Residential care was the most common form of service amongst these persons (THL, 2018). It is difficult to estimate the extent of technology use in the Finnish organizations providing residential care, but Finland is typically perceived as a technology-embracing context. Commonly used technologies are electronic documentation systems, medical technologies and various tools enabling safe care work. Computer tablets, game consoles and other technologies used in the interaction between older adults and care workers are only used in some organizations.

Our study consists of two third-sector care organizations providing services for the public sector in Finland. We call the first organization WeCare and the second SeniorStrength. The

organizations provide a variety of services to older adults ranging from services in the older adults' home to residential care with either limited or round-the-clock services. The residential care homes are located in large buildings with several units, where each client has her/his own room and bathroom. The dining room and recreation facilities are shared.

We collected our material in one residential home at WeCare, while the data at SeniorStrength was collected in two different residential care homes owned by the organization. Our material consisted of several sets of data: observations, interviews with 12 interviewees (at WeCare six interviews with care workers and two with project workers, and at SeniorStrength two interviews with individuals and one in which two care workers participated), and documents (organizational documents and documents available on the case organizations' websites).

The research material was collected in 2013 and 2014 in the interviewees' workplaces. First, we conducted observations at WeCare to gain insight into how a game console was used in practice in care work. We then conducted interviews first at WeCare and then at SeniorStrength. The length of the interviews ranged from 30 minutes to two hours. The interviews began by gaining informed consent from the participants of the study, which also involved signing a written 'research agreement' before each interview to guarantee the interviewees confidentiality and anonymity. The interviews were carried out in Finnish, the first language of the interviewees, and were transcribed in detail. We had access to official documents in the studied organizations. In the analysis, pseudonyms are used to guarantee the interviewees and participating organizations anonymity and confidentiality.

The study has been carried out in female dominated organizations, which implies that all interviewees but one are women. The age of the interviewees ranged from 31 and 57, the

average age being 44. All interviewees had an education in social and/or health care including the project workers. The interviewees work tasks varied between nursing, physiotherapy, care work, administrative or managerial and project tasks.

The types of technologies that had been implemented at WeCare were a video game console for entertainment and physical exercises and at SeniorStrength computer tablets for recreational purposes. WeCare also had a senior computer and laptops used both for entertainment and to teach older adults common computer skills.

Analytical Approach

The case study methodology does not require any particular analysis procedure. Discourse analysis provides a well-established methodology for our inquiry. From a discursive standpoint, language has a central role in sustaining and contesting constructions of innovation (as of any social reality); language is a form of action as it constructs reality and attributes it with meaning. We combine our discursive approach with a biographical approach to history-making and accounts of time developed by Roberts (2004; see also Gergen, 1973).

Roberts' approach can be used a method for analyzing conceptualizations of time, that is, how subjects interpret their own experiences and make connections between them in order to produce meaning and order by using different time tenses. Time tenses may also shift as the subject talks about the past, the present and the future. For example, Roberts argues that sometimes the subject may speak about the past by using the past tense (as the experience was 'gone forever'), while perhaps at another point in time referring to past lived experiences as in the present (as a past experience was occurring in the present 'here and now'). By discursively analyzing such shifts, one can gain important insights into how social realities and subject

positions are constructed and altered. Roberts provides a useful model (see Table 1) for analyzing a variety of different uses of time conceptualizations, although he emphasizes that a specific model cannot illustrate all complex processes around time.

Insert Table 1 about here

Roberts' (2004) model illustrates how the subject can make use of nine different time conceptualizations. We adopted the model to analyze how the interviewees both talk about their work and engage in subject positioning by making use of the specific time tenses. This shows how the participants of the study have arrived where they are, how they currently relate to the self in relation to technologies in their work and how they draw on their past. The time conceptualizations used thus show if the participants identify with a subject position (for example, through nostalgia) or resists positioned offered in discourse (for example, through discomfort).

The analysis was conducted as follows. First, organizational documents and observations of the use of the game console at WeCare were analyzed in order to gain insight into how the adopted technology was used and talked about in the organization. Second, we analyzed all eight interviews conducted in WeCare. The analysis involved readings and re-readings of the transcribed interviews focusing on two topics: (1) how the interviewees constructed innovation, that is, the meanings attached to innovation *and* different time tenses drawn upon on this talk, and (2) how the care workers were subject positioned in relation to these meanings and time conceptualizations. The sections in which the adopted technology was ascribed with meaning were first marked and then colored in different colors depending on their content. Through this procedure, we were able to identify dominant constructions of innovation and care workers.

Certain constructions appeared clearly throughout the material. By dominant constructions we refer to meanings that all or the majority of the interviewees constructed in relatively similar way. Through this process, we then achieved a preliminary thematic saturation. Third, we analyzed documents and the interviews conducted at SeniorStrength. In line with the multiple-case study design, this analysis was conducted as a ‘literal replication’ to examine possible similar results as in the first WeCare case and to reach thematic saturation. Through this process, we thus achieved a cross-case analysis.

Results

In this section, we present the cross-case analysis. As we will show, the care workers constructed innovation primarily in two different and contradicting ways: as a source for optimism and a source for struggle. To discuss these findings the results section is divided into two parts. First, we show how the interviewees constructed an innovation optimism in relation to past, present and future care work and how they are subject positioned in relations to these meanings. Second, we show how technologies in care work at times also are constructed as problematic and illustrate subject positioning within this context.

Innovation as a Source for Optimism

The care workers’ often talked about the technologies that recently had been implemented in rather optimistic terms. They saw the recent technology implementations as inevitable, as a break with the past and as an opportunity to take up new ways of carrying out care work. Ann from WeCare claimed: ‘at the moment the technology develops at such a high speed, we just have to keep up’. Keeping up with the technological developments and implementing technological innovations were seen by many as desirable:

... today the competition of customers is tough ... we have to show off [technology], that we are modern, although our facilities are old. (Ann, WeCare)

I do believe it's worth investing in this [technology implementation] in elderly care. (Elina, SeniorStrength)

As above the care workers typically argued for technology implementation thus constructing a highly optimistic view on technology and by doing so (re)produce the pro-innovation discourse. When taking a closer look at the production of the pro-innovation discourse, one can see that this discourse was constructed in different ways in the two case organizations. At WeCare, the pro-innovation discourse was primarily constructed in relation to innovation as a widespread phenomenon in society or as connected to the competition on the market (see, for example, Ann's account above about the centrality of competition). More specifically, pro-innovation meanings were constructed in relation to *macro* level phenomena. In contrast, the pro-innovation discourse was constructed in relations *micro* level care practices at SeniorStrength, for example, one care worker at SeniorStrength claimed:

I think it has been fun, real fun, that we got to do this ... The idea was to do things that they [the older adults] find interesting, that they want to do, and then we went along with what they were interested in and what they felt was fun. ... I sat down in the corner of the sofa and searched for something on the tablet, and many [older adults] came to ask me: 'What kind of device do you have there?' and that's how it all began. (Elina, SeniorStrength)

As described above, technology implementation at SeniorStrength was highly celebrated by the care workers and seemed to neatly fit into past micro care practices and interactions. Therefore, when fantasizing about future technologies in relation to the pro-innovation discourse, the care workers at SeniorStrength expressed a desire to continue using the tablet in future care work and hoped for mobile applications that increase interaction between older adults and/or care workers. Likewise, some care workers at WeCare expressed hope when fantasizing future:

... I would have excellent opportunities, if my employer gave us computers to use with the older adults ... I would show YouTube to them, use Wikipedia, look at what she has done, it would empower her ... (Nina, WeCare)

Although the hopes expressed at SeniorStrength were based on present experiences and hopes voiced at WeCare were connected to anticipation of future change, both built on a desire for future technologies that provide improved opportunities for interaction between care workers and older adults.

In sum, many care workers constructed a highly optimistic view on technology in both case organizations and by doing so (re)produced innovation as being ‘always good’ (see also Godin & Vinck, 2017). The dominant time orientation seen here is future-present (the present as in the future), which reinforces the sense of technology adoption as inevitable. More specifically, the care workers felt that the present is changing fast (technology is increasingly adopted at various levels and contexts in society) and continuous changes are to be anticipated. However, it is worth noticing that the talk of hopes and anticipations were grounded in very different contexts in WeCare and SeniorStrength. At WeCare, the innovation optimism was constructed

in relation to present macro phenomena in society and at SeniorStrength in relation to micro care practices. We will now proceed to examine the implications of these findings on subject positioning.

Subject Positioning and Optimism: Invisibility, Motivating and Consent. When confronted with the pro-innovation discourse the care workers at WeCare often talked about present macro level phenomena in society and in this talk constructed themselves as representing an organization that is or should be modern by following the technology trend.

Everyone has to keep up with the technological development, like places like this care provider, in my opinion; customers are beginning to demand it. (Isabel, WeCare)

By claiming that technology adoption is essential and provides an opportunity for an organization to create a modern, technology embracing and convincing image, and/or for learning new things, many interviewees at WeCare legitimized the pro-innovation discourse. However, in this talk the self of the care workers at WeCare was relatively invisible or absent. The pro-innovation discourse thus seemed to provide few present opportunities of inclusion of care workers and excluded new ways of understanding care workers in the future. The exception was a few accounts in which WeCare care workers fantasized about future technologies that could improve the interaction between care workers and older adults. In these accounts the care workers embraced interaction and in doing so fantasized about a desired ‘interactive care worker self’.

At SeniorStrength the construction of the pro-innovation discourse in relation to micro level practices (rather than macro phenomena) provided a better ground for ‘the interactive care

worker self’ to emerge. The care workers claimed to have been curious of the computer tablets when they arrived in the organization and found it easy to arouse curiosity of the tablets amongst older adults within daily micro practices. They explained that the tablets activated older adults and increased the interaction between care workers and older adults.

It can improve the interaction between the care worker and the resident ... Motivation is really important in my work, to get the individual to become motivated and to want to live, as some are quite depressed. (Amanda, SeniorStrength)

Above the care workers are subject positioned as ‘motivators’ through which ‘an interactive care worker self’ emerges. Accounts about future technology implementation reinforced this subject position as the care workers expressed a desire to continue using the computer tablets in the future. The care workers hoped for mobile apps that improve interaction with older adults even more efficiently.

In sum, the care workers were subject positioned within the pro-innovation discourse in very different ways in the case organizations. Table 2 summarizes the subject positioning in relation to the innovation optimism over time.

Insert Table 2 about here

While the present transformation invited the care workers at SeniorStrength to take up ‘motivator’ and ‘interactive self’ positions (resulting in identification with the pro-innovation discourse), the invisibility of care workers within the transformations was striking amongst the

WeCare care workers. However, some future fantasies at WeCare created small cracks in this invisibility by expressing identification with ‘an interactive care worker self’.

Constructing Innovation as a Source for Struggle

Although the pro-innovation discourse had gained a rather dominant position both at WeCare and SeniorStrength, the technology implementation did not always fit neatly into care work. At WeCare, when the interviewees discussed their daily work and mundane practices of care work in contrast to when innovation was talked about on a macro level, innovation was often constructed as problematic:

... care work is so embedded in the past and embedded in practices, to really get it into use, that technology is in use, to see the advantage [is challenging]. (Jasmine, WeCare)

.... well you have to motivate so much [the older adults to use technology]. ... they ask after having lived long lives: ‘Why do we need this now?’. It’s so hard. It’s challenging [to motivate older adults]. (Riina, WeCare)

As one can hear above, the care workers had faced a variety of problems, primarily tensions within care practices, when being involved in technology implementation. Likewise, the care workers at SeniorStrength talked about situation in which they had not found the use of technology beneficial:

It doesn’t of course compensate for exercising or physical activity, but it can provide a useful addition in particular in activating the brain. (Amanda, SeniorStrength)

The care workers at SeniorStrength claimed that older adults living in residential care easily become passive if not motivated and activated by the care worker. They experienced computer tablets as useful for cognitive training, but not, however, for physical exercising. They thus chose not to use the tablets for activating older adults in exercising.

Technology implementation was not only constructed at WeCare as problematic in daily care practices, but also seen as a threat for future care work:

We'll take the social contacts away from them [if care is organized through telecare rather than in residential care homes]; few people are loners. They will lose the interaction with others, and that's how you get depressed, you will feel all your pains. I argue that if that happens you will leave life premature. ... [policy makers think that] 'leave them all at home with some systems, stay there'. Somehow I feel that in this respect this society is going in the wrong direction. (Riina, WeCare)

Here, Riina discusses the current implementation project at WeCare. In a similar vein, many interviewees fantasized about future technologies in care work and in doing so, used the project as a discursive resource for challenging and resisting certain technologies and the dominating pro-innovation discourse. Similar concerns were, however, not expressed at SeniorStrength.

In sum, although the care workers predominantly constructed innovation in optimistic terms, technology implementation was often experienced as problematic at the level of micro practices, in particular, at WeCare. This caused tensions at WeCare as the pro-innovation discourse produced strong consent: the care workers were expected to implement new technologies

despite experiences of problematic practices. At SeniorStrength the care workers, however, rejected technology implementation in certain situations and were hence able to reduce tensions. When the problems arose at WeCare the time conceptualization present-present seemed to dominate as the care workers were to varying degrees trapped with struggles in the present within the context of the technology implementation without a vocabulary for rejecting or problematizing the technology. When fantasizing around the future care work the interviewees typically used a future-future time orientation (the future in the future; new technology as entering the work in the future) colored by anxiety and fear of how innovation may endanger the quality of care. Worth noticing here is that the utterances of fear highlighted the centrality of interaction in future care in a similar way as the accounts of hope and anticipation discussed under the section about the pro-innovation discourse.

Subject Positioning and Struggle within Daily Work Practices: The Motivating, Obedient and (Dis)identifying Subject. When discussing the implementation of the different technologies in daily care practices all interviewees with the exception of one project worker claimed that they had not been involved in the planning of the projects. Instead, the care workers took up an implementer and motivator subject position:

My most important role has been to introduce the older adults to it, to praise it and motivate them to use it, that's perhaps the most important role I have had. (Riina, WeCare)

Above Riina draws on a motivator subject position that calls the care workers into a position in which they are expected to persuade older adults to begin using technologies, a position commonly drawn upon at WeCare. This position resonates with the motivator position

constructed at SeniorStrength in relation to the pro-innovation discourses. Motivating older adults to begin playing the game console was, however, demanding at WeCare in contrast to the situation at SeniorStrength, where older adults were carefully tempted to begin using computer tablets. The care workers at WeCare explained that it took a lot to encourage older adults to see the benefits of the game. However the dominating pro-innovation discourse did not afford the care workers agency to reject or problematize the implementation, thus locking them into the motivator position that gave rise to discomfort:

... you always feel inadequate and insufficient, that you don't know how to do it ... I realize I'm always an underdog, always the learner and I'm also the forgetter.
(Jasmine, WeCare)

Here we can hear how the care workers at WeCare were pushed into arenas that they had no or little professional education or skills in, but were expected to embrace and implement. Despite being confronted with tasks that created discomfort, the care workers did not resist the project.

I have to hide my own attitude from the older adults, because if I don't believe in it, why would the older adults do. (Ann, WeCare)

Ann explains above how she hides her negative attitudes to the implemented technology from the older adults when she attempts to motivate them to play the games. This suggests that she engages in the technology implementation project through loyal obedience while simultaneously hiding her dis-identification and resistance towards it. This captures well the care workers' subject positioning within the context of daily care practices at WeCare, but differs strongly from the SeniorStrength case where choice and agency was emphasized:

... it's offered as a resource, but you don't have to use it. (Amanda, SeniorStrength)

As Amanda explains above, the care workers at SeniorStrength seemed to be afforded more agency than the WeCare care workers to reject technology implementation. When fantasizing about the future the care workers touched upon alternative ways of organizing and carrying out care for older adults and when doing so highlighted (implicitly or explicitly) the importance of ‘an interactive care worker self’:

This feeding robot, that feeds, sounded awful. When the person, who has lost the ability to talk, your only interaction, as she can't answer, is when you meet and spend time with her when she is washed, when you brush her hair, and when being fed you talk to her and you can touch her and say 'thank you for the food' and tell her what's for dinner and so on. Then if a robot does that, it's game over. (Nina, WeCare)

Here Nina talks about robots potentially taking over some of the of care workers tasks. This collides with the subject positions the care workers identify with. Typically, they saw themselves as caring and loving with deep respect for the older adults. As Nina said the older adults are ‘vulnerable people, who need to be protected’ through care that is based on face-to-face interaction and touch. They thus challenged the societal debates and efforts to reduce interaction between older adults and care workers and questioned the economic austerity policies effecting this sector by emphasizing threats to the quality of the care.

To conclude, there are important similarities, but also differences, between the subject positioning within everyday care practices in the analyzed cases. These differing subject positions are summarized in Table 3.

Insert Table 3 about here

The care workers in both cases were excluded from the planning process of technology implementation, and were thus addressed as merely motivators and implementers. However, at WeCare the dominant pro-innovation discourse trapped the care workers in present struggles by silencing resistance and excluding alternative futures as well as subject positions, thus producing dis-identification. Although the care workers at SeniorStrength also had identified contexts in which they consider technology implementation as non-beneficial, the motivator and implementer position was in contrast embraced and celebrated in the present. This was because the care workers at SeniorStrength had agency to move in and out of this position depending on the care workers' view of the benefits of the technology in particular contexts. Both the similarities and the differences illuminate how hierarchies and power relations in organizations may or may not provide opportunities for implementers to move in and out of restrictive subject positions.

Discussion

In this article, we have examined how the contemporary transformations towards technology implementation in elderly care impact care workers by analyzing how innovation is discursively constructed in care work and how care workers are subject positioned in relation to these meanings. While previous language and communication analyses within the elderly care field have predominantly explored how various methods can be used to improve

communication in care through, for example, art (Hamilton, 2015), writing and poetry (Ryan & Schindel Martin, 2011), re-telling of life stories (MacLagan & Grant, 2015), we have contributed to an emerging body of literature that explores what occurs when technology enters the interaction between older adults and care workers. Further, previous innovation and innovation adoption studies have given little attention to how technology implementation effects employee subjectivity and quality of care. We extend these fields of research by producing new empirical insights and theorizing around *effects* of innovation on subjectivity in elderly care.

The findings of our study suggest that in relation to technology implementation the pro-innovation discourse dominates in the case organizations studied as it also does more generally in the contemporary economic and political ideologies of the west (Godin & Vinck, 2017). Moreover, innovation and technology implementation were celebrated at WeCare and SeniorStrength. This implied that the care workers were addressed as implementers and motivators of technology adoption. The care workers highlighted, in particular, the importance of interaction in care work, thus also constructing and strongly identifying with an interactive care worker self.

The pro-innovation discourse not only strongly structured care work when innovation was a source for optimism, but also when care workers experienced difficulties in technology implementation. Moreover, when the care workers at WeCare found the adopted technology problematic, they still showed loyal obedience with the implementer position in line with the pro-innovation discourse and strived to hide their discomfort. The discomfort was grounded in decreased interaction with older adults. This condition was avoided at SeniorStrength due to an organizational context characterized by power relations that afforded care workers more

agency to move in and out of the implementer subject position in order to maintain the celebrated interactive care worker self. Thus, the analysis suggest that the different webs of power relations in the case organizations had far reaching impact on how continuity in subject positioning was achieved at SeniorStrength, while disruption between past, present and future subject positions occurred at WeCare causing discomfort in the present, a fear of the future and dis-identification. Table 4 brings together these findings and illustrates the invisibility and disruption in subject positioning at WeCare as well as the continuity in the SeniorStrength case.

Insert Table 4 about here

As Table 4 illustrates, although both case organizations analyzed embraced the pro-innovation discourse and the care workers identified with the interactive care worker self, subject positioning unfolded in relatively different ways in the two different organizations. At WeCare the care worker self was relatively absent in the production of the innovation optimism, while struggles in present daily care practices trapped them in the motivator position causing disruptions between past interactive and present subjectivities and as well as between present and imagined future subjectivities. Such tensions were absent in the SeniorStrength case where subject positioning was characterized by continuity.

These findings highlight the benefits of theorizing and empirically examining innovation driven transformations as processes of discourse, micro practices and subject positioning in which various time conceptualizations can reveal the effects of technology implementation on the subject. By engaging in such theorizing this study opens up a discussion about how conceptualizations of innovation produces continuity and disruption on the level of subjectivity; how tensions may obstruct innovation while reflection, less asymmetrical power

relations and agency on the other hand may help problematizations of innovation and following effects.

Conclusions

The aim of this article has been to examine how care workers and project workers in elderly care are effected by contemporary transformations by exploring how they construct meanings around innovation implementation and their selves. We see three central contributions in our study.

First, our study suggests that the pro-innovation discourse may have significant implication for care work in transition if innovation is seen as exclusively positive and as inevitable. Although innovation has created important new opportunities and relations in care, we argue that the dominant innovation discourse is one-sided and may result in societal and organizational myopia, thus causing constraining effects on a micro level (as in the WeCare case).

Second, our findings suggest that care workers' experiences in the past may easily be overlooked and disregarded when the language around innovation strongly focuses on the future and the pro-innovation discourse. It could thus be argued that when efforts are made in organizations to break with old care practices in order to create change there is danger in not analyzing tensions between desired futures and care workers' expertise about and experiences of quality in care (for example, the centrality of interaction). Our study has shown how Robert's model for analyses of time conceptualizations can be useful for advancing knowledge around how different organizations conceptualize the past, the present and the future of care work and innovation.

Finally, our study contributes with new insights into care workers' subject positioning within the contemporary innovation discourse. The discourse primarily invites care workers to implement technologies and motivate older adults to use them, even when care workers see technology as a threat to the quality of care. As illustrated in our study, care workers who identify problematic aspects of technology implementation do not typically resist technology as such, but rather tend to experience discomfort with the reduced face-to-face interaction and touch. This was apparent, for example, in our study when the care workers identified with subject positions that provide opportunities to interact with older adults. Said differently, the pro-innovation discourse may direct care in ways that trap care workers in motivator/implementer subject positions and as an effect conceals alternatives. This situation is challenging as care workers rarely are invited to participate in the early stages of technology research and development or in project planning. This may thus restrict care workers' possibilities to negotiate desirable subject positions.

One the other hand, our study also illustrate how organizations can navigate their way around this challenge as in the case of SeniorStrength, where power relations afforded care workers agency to reflect upon beneficial and non-beneficial ways of adopting technology in care. Both cases analyzed thus illuminate how subject positioning over time (before, during and after implementation) are constructed in relation to each other. When organizations implement new work practices the success of the changes and the effects on employees may thus to great extend depend on subject positioning and how the subject positioning unfolds in relation to past positioning and identities. A practical implication of the findings is therefore that care organizations should consider how transformations may provide continuity and/or imply undesirable disruptions between past, present and future subject positions. Table 4 may help

practitioners as also scholars to analyze organizational approaches to innovation and how such approaches grip care workers and direct work.

Worth highlighting is also the importance of context. The analyzed cases are embedded in a local context, Finland, where innovation typically is highly valued. The study and in particular Table 4 may thus be useful for improving care in similar contexts. However, since the pro-innovation discourse seems to have gained a relatively dominant position in the social and health care sector, the proposed approach to innovation in elderly care could also be useful for the increasing number of care contexts where the pro-innovation discourse is gaining terrain and in organizations taking their first steps towards technology implementation.

In sum, our study highlights the benefits of theorizing transformations as processes of discourse, micro practices and subject positioning where various time conceptualizations are intertwined with (dis)identification and ultimately with quality of care. However, rather than viewing tension as obstructing innovation, tensions in relation to reflection could be used for problematizing meanings ascribed to innovation, implementation projects and subject positions (see also Thomas & Davies, 2005; Thomas & Hardy, 2011). Organizations may gain from adopting practices that invite reflection and reflexivity around quality and subject positioning in particular in relation to the past. Tensions arising during organizational change may thus not constitute a problem as we have shown in the SeniorStrength case, but can act as a source for organizations to explore and reflect around different alternatives for the future care. This is in particular important in sectors involving social and health care as these sectors often are characterized by hierarchies in which different professions have different opportunities regarding subject positioning and warranting voice. We therefore suggest a discursive approach to and theorizing of innovation in care work, which is sensitive to how discourse and power

relations construct care workers and their opportunities to reflect, problematize and shape future innovation in their organizations.

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Table 1. Time Conceptualizations (adapted from Roberts, 2004, pp. 96-97).

	Past	Present	Future
PAST	PAST-past: The <i>past</i> as/in the past (nostalgia) Example: ‘That was in my past’	PAST-present: The <i>present</i> as/in the past (reflection) Example: ‘My experiences now were also like that’	PAST-future: The <i>future</i> as/in the past (expectation) Example: ‘Those times for me will come back’
PRESENT	PRESENT-past: The <i>past</i> as/ in the present (reminiscence) Example: ‘My life is still the same’	PRESENT-present: The <i>present</i> as/in the present (contemporality) Example: ‘I take life as it is’	PRESENT-future: The <i>future</i> as/in the present (optimism, pessimism) Example: ‘My prospects will be the same’
FUTURE	FUTURE-past: The <i>past</i> as/in the future (myth-making, return) Example: ‘I need to learn from my mistakes’	FUTURE-present: The <i>present</i> as/in the future (anticipation) Example: ‘I think my life is changing a lot’	FUTURE-future: The <i>future</i> as/in the future (fear, anxiety, unpredictability) Example: ‘I do not know what is in store for me’

Table 2. Past, Present and Future Subject Positioning in Relation to Innovation as a Source for Optimism.

Case	Past	Present	Future
WeCare	Absent self	Absent self	Absent self, anticipation and glimpses of hope and desire for interactive self
SeniorStrength	Technology curious self	Motivator, interactive self, identification	Desire for continuity of interactive self

Table 3. Past, Present and Future Subject Positioning in Relation to Innovation as a Source for Struggle.

Case	Past	Present	Future
WeCare	Exclusion from planning	Trapped as motivators and implementers, dis-identification	Fear of future, desire for interactive self
SeniorStrength	Exclusion from planning	Agentic self	Belief in continuity of the agentic self

Table 4. Summary of Subject Positioning in Relation to Innovation Over Time.

Case and discourse		Past	Present	Future
WeCare	Innovation as a source for optimism	<i>Absent self</i>	<i>Absent self</i> , construction of ‘a modern technology embracing organization’, which results in a relatively absent, invisible self	Relatively <i>absent self</i> in talk of future technology implementation with a few exceptions expressing hope and desire for an <i>interactive self</i>
	Innovation as a source for struggle	Exclusion from planning	Production of ‘ <i>motivator</i> ’ and ‘ <i>implementer</i> ’ subject positions that threaten interaction and thus produces <i>dis-identification</i>	Fear of future technology implementations and a simultaneous desire for solutions that enhance the <i>interactive self</i>
SeniorStrength	Innovation as a source for optimism	Technology curious self	Production of ‘ <i>motivator</i> ’ and ‘ <i>implementer</i> ’ subject positions that improves interaction and thus produce <i>identification</i>	Desire for technologies that provide continuity of the <i>interactive self</i>
	Innovation as a source for struggle	Exclusion from planning	<i>Agentic self</i> moving in and out of the implementer subject position in order to maintain the celebrated <i>interactive self</i>	Belief in continuity of the <i>agentic self</i>

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